Ovarian cancer is the fifth most common cancer in women and the second most common gynaecological cancer, accounting for more than 6,700 new cases diagnosed each year in the UK. The incidence has increased over the past 20–25 years, particularly in the 65 and over age group. The outcome for women with ovarian cancer is generally poor, with an overall five-year survival rate of less than 35%.

Most women are diagnosed with advanced stage disease and this contributes to ovarian cancer having the lowest relative five-year survival rate of all gynaecological cancers. Earlier diagnosis could improve survival outcome. Although 93% of women experience symptoms before diagnosis, a GP with an average sized practice may only see one case of ovarian cancer every five years or so, which makes recognition of the symptoms and early diagnosis more difficult.

Evidence has shown that combining a number of symptoms that occur on a persistent or frequent basis (particularly more than 12 times per month) can have a sensitivity of up to 85% and a positive predictive value of the order of 0.2% i.e. 1 in 500 women would have ovarian cancer. These data form the basis of the recent NICE guideline recommendations.

The NICE guidance recommends that serum CA125 should be the initial test followed by pelvic and abdominal ultrasound if the serum CA125 is abnormal (i.e. ≥35 IU/ml). These tests should be requested by GPs prior to definitive referral. If both tests are abnormal, then these women should be referred on the two-week urgent referral pathway to the local specialist unit. Those with elevated serum CA125 but normal ultrasound scans may need a gynaecological referral whereas women with normal CA125 results may require appropriate gastrointestinal evaluation.

When ultrasound, CA125 and clinical status suggest ovarian cancer, a CT scan of the pelvis and abdomen should be performed to establish the extent of disease. Wherever possible the diagnosis should be histological as this is the only way of determining the cancer type and grade.

Surgery and chemotherapy, either in combination or individually, remain the therapeutic mainstays. Surgery is often performed at the outset of treatment, especially when assessment indicates that all macroscopic disease may be removed as in early disease. It allows staging and histological diagnosis, and is therapeutic, often curative, when all disease can be removed. In advanced disease chemotherapy has prime therapeutic importance.

CONFIRMING DIAGNOSIS

Once referred, the onus is on making the correct diagnosis as quickly as possible. Safety and cost-effectiveness are important considerations. When ultrasound, CA125 and clinical status suggest ovarian cancer, a CT scan of the pelvis and abdomen should be performed to establish the extent of disease and facilitate decisions concerning the appropriateness and timing of surgery. The NICE guidance does not advocate MRI as a routine test for assessing women with suspected ovarian cancer.

Wherever possible the diagnosis should be histological as this is the only way of determining the cancer type and grade and will also exclude diagnoses such as tuberculosis, inflammation, fibrosis and other infections.

Different histological types of ovarian cancer require different treatments. There are various methods of obtaining a tissue diagnosis including needle biopsy, laparoscopy or open laparotomy. All are invasive and therefore carry risks.

Histological diagnosis is usually made following surgery. In some cases, for example, where surgery is not feasible or where chemotherapy is the initial treatment, other options for obtaining a histological diagnosis may be considered. Cytology is generally safer than tissue biopsy but has a lower diagnostic accuracy. When it is hazardous or difficult to obtain a tissue diagnosis, the risks of such procedures need to be weighed against the potential benefits of greater diagnostic accuracy. After discussion with the patient it may be concluded that a tissue diagnosis is not essential.

TREATMENT

Surgery and chemotherapy, either in combination or individually, remain the therapeutic mainstays. Surgery is often performed at the outset of treatment, especially when assessment indicates that all macroscopic disease may be removed as in early disease. It allows staging, and histological diagnosis and is therapeutic, often curative when all disease can be removed.

However, when dealing with advanced cancer that cannot be completely extirpated, the role, extent and timing of surgery are controversial. Surgery may be performed before or during chemotherapy; the best timing has yet to be established.

Whatever the value of surgery, in advanced disease chemotherapy has prime therapeutic importance. The current NICE guidance recommends systemic platinum-based combination therapy and although there is increasing evidence that intraperitoneal chemotherapy may be effective, albeit toxic, this is still under evaluation.

There is good evidence highlighting the need for the relevant information, tailored to the needs of the individual, to be offered to women at the time that most suits them. Immediately after diagnosis, this principally concerns information related to treatment, its side effects, the disease and prognosis.